

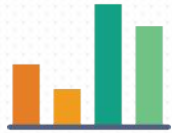


Basic Statistics

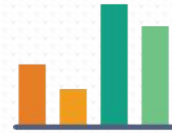
- MUQUAYYAR AHMED
DATA SCIENTIST

Agenda

Statistics Basics



Introduction to
Statistics



Different areas
of statistics

What is Statistics?

1

Statistics is the science of conducting studies to collect, organize, summarize, analyze and draw conclusion out of the data.

2

Statistics deals with collective informative data, interpreting these data and drawing conclusion from data.

3

Statistics are used in many disciplines: Healthcare, Business, Education, Insurance, Marketing, telecom etc.

Two areas of statistics

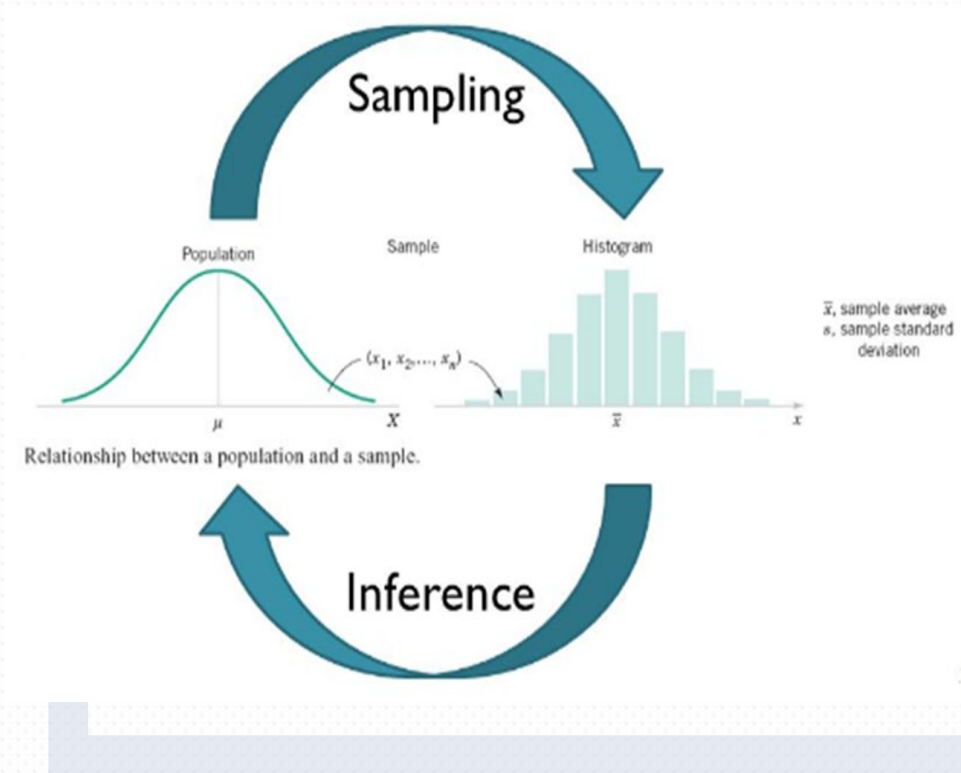
GNI PER CAPITA ANALYSIS USING WORLD BANK 2011 DATA

Mean	11616.7
Standard Error	1361.2
Median	4200
Mode	430
Standard Deviation	17591.1
	3094480
Sample Variance	35.5
Kurtosis	4.99
Skewness	2.27
Range	88680
Minimum	190
Maximum	88870
Sum	1939990
Count	167

Descriptive statistics

- It helps us to understand the raw data and drive the data according to our business problem.
- Uses numerical and graphical techniques to look for patterns in a dataset, to summarize the data, to present information in a convenient way.
- With a numerical techniques we compute: mean, median, variance, standard deviation, percentages etc.
- The graphical techniques include bar graph, histogram, scatter plot, box plot, pie chart, line chart etc.
- Example of Descriptive statistics analysis

Cont...



Inferential statistics

Use sample data to make estimates, decisions, predictions or other generalizations about a larger set of data.

Example: Survey companies use the inferential techniques in their polls to generalize to the US or other population.